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EXAMINER

NGUYEN, CINDY

ART UNIT PAPER NUMBER

2161

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/733,012

Applicant(s)

GOVINDARAJAN ET AL.

Examiner

Cindy Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

This is in response to communication filed 04/22/04.

1. Claim Objections

Claims 7 and 37 are objected to because of the following informalities: claim 7 and 37 are repeated as claims 3 and 33 respectively. Appropriate correction is required.

2. Claim Rejections - 35 USC § 112

Claims 1-16, 31-46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1, 12, 31 and 42, It is unclear whether “associating one or more first descriptions with corresponding first **resources**” or instead “associating one or more first descriptions with corresponding first **resource**”, are they the same first resource or they are many first resources. Correction is required.

3. Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-26, 28-56 and 58-60 are rejected under 35 U.S.C. 102(e) as being anticipated by Hunt (US 6629123).

Regarding claims 1 and 31, Hunt discloses: a computer system and a method of typing resources, including one or more first resources, in a distributed system executable over a computer network, the method comprising:

At least two computers connected over the computer network (10, 5, fig. 1, Hunt) and a computer program executable on each computer generating processes accessible to at least one other computer over the computer network (col. 7, lines 64-67, Hunt) wherein the computer programs further comprises computer instructions for

for each first resource (library) (col. 9, lines 65-66, Hunt), associating one or more first descriptions¹ with corresponding first resources (col. 9, lines 66 to col. 10, lines 7, Hunt), wherein at least one of the first resources is discoverable² using a corresponding first description (col. 13, lines 4-21, Hunt); and

for each first description, associating a first explanation³ with a corresponding first description (col. 10, lines 4-9, Hunt), wherein the first resource is discoverable using a corresponding first explanation and wherein the resources further include second resources⁴ (col. 7, lines 43-55, Hunt); for each first explanation that is not supplied by a distributed infrastructure associated with the distributed system: associating one or more second descriptions with a corresponding first explanation, wherein the first explanation is discoverable using the second description (col. 13, lines 23-37, Hunt); and for each second description, associating a second

¹ Examiner interpreted first descriptions as interface functions.

² The "Unknown" interface includes a member function name "QueryInterface()" It can be called with an interface identifier as an argument and returns a pointer to the interface associated with that interface identifier.

³ attribute

⁴ a library holds many functions.

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explanation with the second description, wherein the first explanation is discoverable using the second explanation⁵ (col. 13, lines 46-56, Hunt)

Regarding claims 17 and 47, Hunt discloses: a system and a method of discovering one or more target resources in a distributed system executable over two or more computers interconnected by a computer network, the distributed system including an infrastructure executable on each computer connecting the resources, the resources including service, vocabulary and contract resources, the method comprising:

receiving a search request for the target resources from a client, including a target description describing the target resources (col. 10, lines 64 to col. 11, lines 1, Hunt);

searching a database of resource information, wherein the resource information includes:

one or more resource descriptions describing associated resources (COM library), explanatory information. explaining the resource descriptions (class, instance), and access data for accessing the associated resource(access interface) (col. 11, lines 10-27, Hunt);

determining whether one or more resource descriptions match the target description (col. 11, lines 26-28, Hunt); and

sending result information about matching resources to the client (col. 11, lines 26-28, Hunt).

As per claim 12, all the limitations of this claim have been noted in the rejection of claim 1. It is therefore rejected as set forth above. In addition Hunt discloses: for each first access data, if the first access data is not supplied by the distributed infrastructure (col. 13, lines 23-37,

⁵ The interface pointers point to an instance data structure for the component, the COM defines several standard

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Hunt); associating a third description with the first access data, wherein the first access data is discoverable using the third description (col. 13, lines 23-37, Hunt); associating a third explanation explaining the third description, wherein the access data is discoverable using the third explanation (col. 13, lines 27-37, Hunt).

As per claim 42, all the limitations of this claim have been noted in the rejection of claim 1, 11 and 12. It is therefore rejected as set forth above.

Regarding claims 2 and 32, all the limitations of these claims have been noted in the rejection of claims 1 and 31 above, respectively. In addition, Hunt discloses: wherein one or more of the first explanations are supplied by the distributed infrastructure (col. 11, lines 10-27, Hunt).

Regarding claims 3, 7, 33 and 37, all the limitations of these claims have been noted in the rejection of claims 1 and 31 above, respectively. In addition, Hunt discloses: wherein the first explanations are second resources separate from the first resources (col. 10, lines 21-34, Hunt).

Regarding claims 4, 14, 34, 38 and 44, all the limitations of these claims have been noted in the rejection of claims 1, 12 and 31 above, respectively. In addition, Hunt discloses: wherein: each first, second and third description includes one or more first, second and third attributes describing the first resource (col. 10, lines 4-9, Hunt); and for each first, second, third description, each first, second, third explanation includes one or more first, second third attribute properties explaining the first attributes⁶(col. 10, lines 49, Hunt).

Regarding claims 6 and 36, all the limitations of these claims have been noted in the rejection of claims 1 and 31 above, respectively. In addition, Hunt discloses: wherein one or

interfaces supported by COM objects including the Iunknown interface and every interface include the

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more of the second explanations are supplied by the distributed infrastructure (col. 11, lines 10-27, Hunt).

Regarding claim 8, all the limitations of these claims have been noted in the rejection of claims 1 and 31 above, respectively. In addition, Hunt discloses: wherein each second description includes one or more second attributes describing the first explanation (col. 10, lines 49, Hunt); for each second description, each second explanation explaining the second description includes one or more second attribute properties defining the second attributes (col. 10, lines 49, Hunt).

Regarding claims 9 and 39, all the limitations of these claims have been noted in the rejection of claims 1 and 31 above, respectively. In addition, Hunt discloses: wherein the resources (libraries) further include third resources, further comprising: for each first resource, associating one or more first access data for accessing the first resource, wherein the first resource is discoverable using the first access data (col. 13, lines 5111, lines 6, Hunt).

Regarding claims 10 and 40, all the limitations of these claims have been noted in the rejection of claims 9 and 39 above, respectively. In addition, Hunt discloses: wherein one or more of the first access data are supplied by the distributed infrastructure (col. 11, lines 10-27, Hunt).

Regarding claims 11, 13, 41 and 43, all the limitations of these claims have been noted in the rejection of claims 9 and 39 above, respectively. In addition, Hunt discloses: wherein the first access data are third and fourth resources (col. 14, lines 3, Hunt).

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Regarding claim 45, all the limitations of this claim have been noted in the rejection of claims 1 and 12. It is therefore rejected as set forth above.

Regarding claims 13, 16 and 46, all the limitations of these claims have been noted in the rejection of claims 12 and 45 above, respectively. In addition, Hunt discloses: wherein the first access data are fourth resources, fifth (the library have many resources, Hunt).

Regarding claim 15, all the limitations of this claim have been noted in the rejection of claims 1 and 12. It is therefore rejected as set forth above.

Regarding claims 18 and 48, all the limitations of these claims have been noted in the rejection of claims 17 and 47 above, respectively. In addition, Hunt discloses: wherein the request is received from a locally connected client (col. 10, lines 64-65, Hunt).

Regarding claims 19 and 49, all the limitations of these claims have been noted in the rejection of claims 17 and 47 above, respectively. In addition, Hunt discloses: wherein the request is received from a remote computer over the computer network (col. 10, lines 64-65, Hunt).

Regarding claims 20 and 50, all the limitations of these claims have been noted in the rejection of claims 17 and 47 above, respectively. In addition, Hunt discloses: wherein: the target description includes a reference to the target resource (addref) (col. 13, lines 4-21, Hunt).

Regarding claims 21 and 51, all the limitations of these claims have been noted in the rejection of claims 17 and 47 above, respectively. In addition, Hunt discloses: wherein: the

⁶ Size of dynamic arrays.

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target description (interface function) includes target attributes (instance data structure) describing the target resources; the resource descriptions include resource attributes describing the resources; and determining whether one or more resource descriptions match the target description includes comparing the attributes in the target description with the attributes in the resource descriptions (col. 13, lines 56-66, Hunt).

Regarding claims 22 and 52, all the limitations of these claims have been noted in the rejection of claims 21 and 51 above, respectively. In addition, Hunt discloses: wherein the target description includes a query describing a relationship among the attributes (col. 13, lines 4-21); and determining whether one or more resource descriptions match the target description includes comparing the relationship among attributes described by the query with the relationship among attributes described in the resource descriptions (col. 13, lines 4-21).

Regarding claims 23 and 53, all the limitations of these claims have been noted in the rejection of claims 17 and 47 above, respectively. In addition, Hunt discloses: further comprising: if the target description includes a reference to a contract resource to which the target resources are typed, then searching only resource information in the database typed to the contract resource⁷ (col. 13, lines 23-37, Hunt).

Regarding claims 24 and 54, all the limitations of these claims have been noted in the rejection of claims 17 and 47 above, respectively. In addition, Hunt discloses: further comprising: if the target description includes a reference to a vocabulary resource⁸ to which the target resources are typed, then searching only resource information in the database typed to the vocabulary resource (col. 13, lines 33-35, Hunt).

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Regarding claims 25 and 55, all the limitations of these claims have been noted in the rejection of claims 17 and 47 above, respectively. In addition, Hunt discloses: wherein: if the target description includes a reference to a vocabulary resource and to a contract resource to which the target resources are typed, then searching only resource information in the database typed to the vocabulary resource and the contract resource (col. 13, lines 23-38, Hunt).

Regarding claims 26 and 56, all the limitations of these claims have been noted in the rejection of claims 17 and 47 above, respectively. In addition, Hunt discloses: wherein the result information includes references to the matching resources (col. 16, lines 63-67, Hunt).

Regarding claims 28 and 58, all the limitations of these claims have been noted in the rejection of claims 17 and 47 above, respectively. In addition, Hunt discloses: wherein the result includes interface data for accessing the matching resources (col. 12, lines 6-10, Hunt).

Regarding claims 29 and 59, all the limitations of these claims have been noted in the rejection of claims 28 and 48 above, respectively. In addition, Hunt discloses: wherein the interface data includes the set of IDL interfaces supported by each matching resource (col. 12, lines 6-10, Hunt).

Regarding claims 30 and 60 all the limitations of these claims have been noted in the rejection of claims 28 and 48 above, respectively. In addition, Hunt discloses: wherein the interface data includes stub classes for invoking methods on the matching resources (col. 12, lines 39-48, Hunt).

⁷ Examiner interpreted the Contract resource as client can access the component interfaces through its interface

5. Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 27 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hunt et al. (US 6629123) in view of Teare et al. (U.S 6151624).

Regarding claims 27 and 57, all the limitations of these claims have been noted in the rejection of claims 17 and 47 above, respectively. However, Hunt didn't disclose: wherein the references include URLs to the matching resources. On the other hand, Teare discloses: wherein the references include URLs to the matching resources (col. 7, lines 1-9, Teare). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include reference include URLs to matching the resources in the system of Hunt as taught by Teare. The motivation being to enable the locating identifiers address of the resource.

7. Response to Arguments

Applicant's arguments have been considered, but are moot in view of the new ground(s) of rejection.

8. Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

pointers to by an interface pointer must be a pointer to a virtual function table.

⁸ Vocabulary resource as explanation and description interface functions.

Paik et al. (U.S 6076088). Information extraction system and method using concept relation concept (CRC) triples.

Song (U.S 5432930). System for accessing cobol data files by generating a dictionary of NF relations to be used by a cobol compatible SQL.

Young (U.S 584856). Process and apparatus for simplifying access to information stored in databases.

Narayan (U.S 5418957). Network data dictionary.

9. Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cindy Nguyen whose telephone number is 571-272-4025. The examiner can normally be reached on M-F: 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.



Cindy Nguyen
November 15, 2004



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